THE AVENDT GROUP, INC.

ENGINEERS & SCIENTISTS

Mr. James J. Hahnenberg (SR-6J)
Remedial Project Manager
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

November 7, 2014

Re: **Monthly Progress Report, October 2014**
L.A. Darling Former Facility, NBFF OU2

Dear Mr. Hahnenberg,

Pursuant to Section XI. Order, paragraph 42 Progress Reports of the Administrative Order For Remedial Design and Remedial Action effective July 3, 2011 for the above referenced facility; this is the Monthly Progress Report for work completed during October 2014.

ACTIVITIES COMPLETED AND ANY PROBLEMS ENCOUNTERED –

1. **Remedial Action Phase 1, AS/SVE Installation Operation** – Operated a reported 31 days in the month of October 2014.
2. **Project Schedule** – The entire AS/SVE system is scheduled to be operational until May 2015 (total of 2 years) or until instructed by regulatory agencies.
3. **AS/SVE Monthly O&M Summary Report** - The September 2014 Monthly O&M Summary Report for the AS/SVE System dated October 8, 2014 is attached.

VALIDATED DATA RECEIVED AND NOT PREVIOUSLY REPORTED-

1. **Lab Data**- Groundwater sampling data for site wells were obtained in October 2104.
2. **Groundwater Sampling-** The most recent groundwater sampling data has been added to the attached NBFF OU2 RI Table 4-6 entitled Groundwater Analytical Results and Criteria Comparison – Organics (ug/l).

RD/RA WORK PLANNED FOR NEXT 90 DAYS –

1. **On-Site Inspections-** Maintain liaison with RPM, MDEQ and OneSullivan Representative for scheduling of any on-site inspections.
2. **AS/SVE System Operation Improvements-** The overall system effectiveness was critically assessed with the results of the October 2014 groundwater sampling data. Groundwater VOC concentrations continue to generally decrease across the site. No changes are proposed for the AS/SVE system at the site.

ANTICIPATED PROBLEMS AND PLANNED RESOLUTIONS – None.

If you should have any questions or comments regarding this progress report, please do not hesitate to contact me at your convenience (312) 543-6257.

Respectfully,
The AVENDT GROUP, Inc.

Raymond J. Avendt Ph D. PE
Project Coordinator
Cc: B. Mead-O'Brien, MDEQ; S. Franzetti, NF LLP; T. Maley, OneSullivan, via email

217 MADISON AVENUE, SE • GRAND RAPIDS, MI • 49503
(616) 233-0535 • CELL: (312) 543-6257

E&G
DRILLING & ENVIRONMENTAL
CONTRACTING SERVICES
AN ENVIRONMENTAL & GEOTECHNICAL SERVICES COMPANY

October 8, 2014

Dr. Ray Avendt, Ph.D., P.E.
217 Madison Avenue SE
Grand Rapids, Michigan 49503

RE: AS/SVE Monthly O&M Summary Report – September
Former LAD Store Fixtures, Bronson, MI

Dear Dr. Avendt:

E&G Drilling & Environmental Contracting Services (E&G) is submitting this summary report for the September 2014 operation, maintenance and monitoring (O&M) of the air sparge (AS) and soil vapor extraction (SVE) remediation system installed at the former LA Darling Store Fixtures facility located at 616 N. Matteson Street, Bronson, Michigan. As you know, startup, shakedown and operation of the system commenced on May 7, 2013. The AS system includes 9 sparge wells screened in the shallow zone and 9 sparge wells screened in the intermediate zone. Sparging alternates from the shallow wells to the intermediate wells on 10 minute cycles. The flow to each AS well is individually controlled and metered. The SVE system includes 9 SVE wells and the flow from each SVE well is individually controlled and metered and the total combined discharge flow is metered. The discharge from the SVE system is currently exempt from air permit under Rule 290 and, therefore the vapors captured by the SVE system are directly discharged unobstructed vertically upward. Water and condensate that collect in the SVE conduits are collected in a knock-out (KO) tank and intermittently pumped through a flow meter, in-line particulate filter and liquid phase GAC vessel prior to onsite discharge. The KO water discharge from the SVE system is exempt under Groundwater Discharge Rule 210. During the May 7 and 8 startup the SVE Effluent, Intermediate stage and Influent gas streams were monitored with a photo-ionization detection (PID) unit, and a sample of the Influent was also collected and delivered to an analytical laboratory for VOC analysis.

E&G performed a monthly O&M event on September 15. The O&M event included inspecting, monitoring, recording, adjusting, etc.: lubricant levels; leaks; AS & SVE flow rates; monitored conditions at the SVE flue gas effluent, intermediate and influent stages for each of the sparge zones; conditions at the 4 pressure probes via slack tube manometer; KO water and discharge; operation of the remote monitoring system auto-dialer; and, the general site condition.

The system operated for 30 days from September 1 to September 30. As of September 30, 2014, approximately 198.1 lbs of VOC and 194.6 lbs of TCE have been recovered by the SVE system.

Thank you for the opportunity to provide our services to you. If you have any questions regarding this report, please contact me at 231-499-5479 or email at dave@eandgdrilling.com.

Sincerely,

E&G DRILLING & ENVIRONMENTAL CONTRACTING SERVICES

Dave Warner
Project Manager/Engineer

Cc: Chris Bade, ASI

Enclosures

Documentation of Monthly Discharge for Rule 290 Exemption from PTI
(Pursuant to R 201a of the Air Pollution Control Rules)
Former LAD Facility
606 N. Matteson St., Bronson, MI
September 2014

Sample(s) collected on: 7/15/14 (Summary table attached).

Compound	ITSL ($\mu g/m^3$)	IRSL ($\mu g/m^3$)	Controlled/ Uncontrolled Discharge (C/UC)	[A] Average Flow (cfm)	[B] *Average Concentration (mg/m^3)	[C] (2) Average Daily Recovery/ Discharge (lb./day)	[D] (3) Days Operating (days)	[E] (4) Pounds Recovered/ Discharged (lb./month)
VOC	NA	NA	C					
VOC	NA	NA	UC	200	17	0.306	30.0	9.2
TCE	2	0.2	C					
TCE	2	0.2	UC	200	17	0.306	30.0	9.2

Total Monthly VOC Discharged to Atmosphere (lb./month) (1):	9.2
Total Monthly TCE Discharged to Atmosphere (lb./month) (1):	9.2
Average Total Hourly VOC Emissions (lb./hr) (1):	0.01
Average Total Hourly TCE Emissions (lb./hr) (1):	0.01

Summary of VOC & TCE Recovered in Soil Vapor:

Year 2014 Total Pounds VOC Recovered (lb.):	95.7
Overall Total Pounds VOC Recovered to Date (lb.):	198.1
Year 2014 Total Pounds TCE Recovered (lb.):	92.7
Overall Total Pounds TCE Recovered to Date (lb.):	194.6

Summary of VOC & TCE Emissions:

Year 2014 Total Pounds VOC Discharged (lb.):	95.7
Overall Total Pounds VOC Discharged to Date (lb.):	141.8
Year 2014 Total Pounds TCE Discharged (lb.):	92.7
Overall Total Pounds TCE Discharged to Date (lb.):	138.8

NA - Not applicable.
ITSL - Initial Threshold Screening Level
IRSL - Initial Risk Screening Level
* Concentrations less than the method detection limits are assumed to be zero for use in the equations.
(1) Total uncontrolled discharge of VOC & TCE not to exceed 1,000 #/month & 20 #/month, respectively.
(2) scfm x mg/m^3 x 0.00008986 = lb./day (or: [A] x [B] x 0.00008986 = [C])
(3) System operated for 30 days during the month.
(4) lb./day x days/month operating = lb./month (or: [C] x [D] = [E])

Summary of Vapor Flow Rates and Concentrations - September 2014
Soil Vapor Extraction System
Former LAD Facility, NBFF OU2
606 N. Matteson St., Bronson, MI

Date	Flow Rate (scfm)	UC-VOC (mg/m^3)	C-VOC (mg/m^3)	UC-TCE (mg/m^3)	C-TCE (mg/m^3)
1	200	17		17	
2	200	17		17	
3	200	17		17	
4	200	17		17	
5	200	17		17	
6	200	17		17	
7	200	17		17	
8	200	17		17	
9	200	17		17	
10	200	17		17	
11	200	17		17	
12	200	17		17	
13	200	17		17	
14	200	17		17	
15	200	17		17	
16	200	17		17	
17	200	17		17	
18	200	17		17	
19	200	17		17	
20	200	17		17	
21	200	17		17	
22	200	17		17	
23	200	17		17	
24	200	17		17	
25	200	17		17	
26	200	17		17	
27	200	17		17	
28	200	17		17	
29	200	17		17	
30	200	17		17	
Totals:	6000	510		510	
Average *:	200	17		17	

*For total operating days - 30.0

FORMER LA DARLING - BRONSON, MICHIGAN

SOIL VAPOR EXTRACTION SYSTEM - OPERATIONS & MAINTENANCE LOG

Technician: DW
Weather: O/C
Date: 9-15-14
Temp: 50 Degree F
Electric Meter Reading: 27400 (Kw-Hr)
SVE SYSTEM: ON / OFF
HOURS METER READING: 19499.75
SENSAPHONE: ON / OFF
DAYS SINCE LAST VISIT:
ANY FAULT LIGHT(S) ON?: YES / NO
Vacuum Status Light?: ON/OK / OUT
IF YES, WHICH LABEL(S)?:
FAULT LITES TEST: OK / REPAIR
Process Area Temp: 70 Degree F

	1	2	3	4	5	6	7	8	9
FLOWRATE: (SCFM)	18	16	38	14	22	16	30	16	30
PID: (ppm)	0	0	0	0	0	0	0	0	Dry
VACUUM: (inHg)	1	0	0	2.5	0	3	0	0.5	1

KILMER LOOP VALVE: 10 % OPEN / CLOSED
DILUTION AIR VALVE: 0 % OPEN / CLOSED
Pre-SVE Blower Vacuum: 3 (in. Hg)
Pre-HX GAS Temp.: 128 Degree F
Total Combined Flow: 200 (SCFM)
KO Tank Liquid Level: 0 (Inches)
KO Tank Transfer Pump: ON / OFF ?
KO Tank Flowmeter: 0262218 (Gallons)
FILTER ELEMENT CHANGEOUT?: YES / NO ?
Any Leaks? YES / NO ?
Pre-HX Pressure: 0.5 (Record psi)

SVE VGAC PRESSURE READINGS: (psi) VGAC TANK 1: (lead / lag?) VGAC TANK 2: (lead / lag?)

SVE PID MEASUREMENTS: (ppm) **+ Qualitative Olfactory Check (Odor? If yes, describe)**

PROCESS ROOM: 0.0 no odor
EFFLUENT:
INTERMEDIATE/MIDFLUENT:
INFLUENT: (Shallow) mod odor 9.3 (Deep) 10.3 mod odor

GAS SAMPLES (1/2 Liter Tedlar Bags, Only 72-Hours Hold Time, 8260+ DEQ LIST): VALVES CLOSED?

EFFLUENT:	YES / NO ?	1 OR 2 BAGS ?	YES / NO ?
INTERMEDIATE/MIDFLUENT:	YES / NO ?	1 OR 2 BAGS ?	YES / NO ?
INFLUENT:	YES / NO ?	1 OR 2 BAGS ?	YES / NO ?

ANY VISIBLE EMISSIONS FROM STACK?: YES / NO ?
SVE CARBON CHANGEOUT?: YES / NO ? VGAC TANK: 1 OR 2 ?

COMMENTS / NOTES:

Added 90 days to cell phone

FORMER LA DARLING SITE - BRONSON, MICHIGAN

AIR SPARGE SYSTEM - OPERATIONS & MONITORING LOG

Technician DW Weather: O/C

Date: 9-15-14 Temp: 50+/-

SVE SYSTEM: (ON) OFF AS SYSTEM: (ON) OFF

AS PANEL HOURS: _____ AS HOURS SINCE LAST VISIT: _____

AS PANEL STATUS: (ACTIVE) INACTIVE AS PANEL ROW SPARGING: Int.

AS BLOWER DISCHARGE SYSTEM PRESSURE GAUGE: 22.5 PSI 18.5 shallow

AS BLOWER OIL LEVEL IN SIGHT GLASS?: (YES) / NO

Row/Bank Currently Sparging?: SHALLOW OR (INTERMEDIATE)

Well No.:	AS1S	AS2S	AS3S	AS4S	AS5S	AS6S	AS7S	AS8S	AS9S
Pressure: (psi)	8	6.5	9	8.5	9	8	9	8.5	4.5
Flowrate: (SCFM)	0	3.5	8.5	5	5	2	10	7.5	4

Well No.:	AS1I	AS2I	AS3I	AS4I	AS5I	AS6I	AS7I	AS8I	AS9I
Pressure: (psi)	8	13	14.5	13	15.5	17.5	15	17.5	13.5
Flowrate: (SCFM)	0	6.5	7	7	8	3.5	6.5	7	0

Pressure Probes: (Use Manometer) (in. wc., -/+ = vac or press):	PP-1 (NW)	PP-2 (SW)	PP-3 (SE)	PP-4 (NE)
	0	0	0	0
PID (ppm):	0.0	0.6	9.4	1.2

COMMENTS / NOTES: _____